Libby - Communication
Michelle Hartley

Fw: Response to a number of questions/requests
Carol Campbell, to: Penney Trujillo 09/21/2010 08:36 PM


1258277 - R8 SDMS

Please print
Sent by EPA Wireless E-Mail Services
Sonya Pennock

----- Original Message -----
From: Sonya Pennock
Sent: 09/21/2010 07:46 AM MDT
To: xcav8orr@hotmail.com; gordsull@yahoo.com; perquiaga@eaglesvoice.com; parkers257@yahoo.com
Subject: Response to a number of questions/requests

Attached is EPA's responses to a number of questions/requests that have been received over the past few months. These responses have been thoroughly reviewed by EPA senior managers.


Citizen Questions.9.20.10.pdf


Structures - Lensink ltr.Sept 09.pdf


OU1Structures.city council.ltr.pdf


RiverfrontParkExposureScenario_08_13_2010.pdf


IC Agreement with Libby.OU1.pdf


ChapmanInsp81110.pdf

Sonya Pennock
Office of Communications & Public Involvement
US/EPA Region 8
1595 Wynkoop Street
Denver, CO 80202-1129
Phone: 303-312-6600

Response to Questions
Libby Asbestos Site
September 20, 2010

From DC Orr

Do you have any evidence to support the statement in section 2 page 8 (2-8) of the ROD that "In exchange for the value of the buildings and at no cost to the City, Grace built a water line "?

Response:

Regarding compensation to the City of Libby for structures at the former Export Plant property, Operable Unit 1: In a letter dated September 3, 2009, EPA provided the City of Libby with its position concerning structures and other improvements at the former Export Plant property. (See attached OU1 Structures letter Sept 2009). In another letter to the City dated September 22, 2010, EPA again summarized its position and provided the City with a searchable index of documents in EPA's site file concerning the Libby Cleanup (See attached Structures-Lensink letter Sept. 09) If City Council believes that unresolved issues concerning disposition of the structures and other improvements on the former Export Plant property remain, EPA will consider any new relevant information.

Request for information about the potential risk of exposure, under current conditions, to workers in the Search and Rescue building at the former Export Plant property

Response:

Please refer to sections 4.0, 5.0, 6.0 and 7.0 in the OU1 Remedial Investigation Report, dated August 3, 2009. Specifically, conclusions concerning potential risk to workers in the Search and Rescue building may be found in Section 7.2. This report is available electronically on the EPA web site, www.epa.gov/libby. A paper copy may also be reviewed at EPA's information office in Libby, Montana.

From Gordon Sullivan

Request for any and all data, studies, reports and findings you and EPA used to support your advice to the Libby City Council that EPA considers casual use of OU1 acceptable

Response:

An assessment was conducted of hypothetical exposures to concert attendees held at the Riverfront Park in Libby. As a conservative approach, attendance was

characterized as 8 hours per day for 10 days a year over 25 years. Libby Amphibole air concentrations were based on earlier measurements taken during brush hogging activities (a more aggressive disturbance of surface soil) in addition to those for ambient air that would be more typical of passive activities such as sitting and listening to music or casual walking through the area. Although the Libby-specific toxicity values for Libby amphibole are not yet available, risk-based estimates were derived using currently available toxicity data. Based on derived estimates potential exposures to Libby Amphibole during the concert were within acceptable ranges.

Please see:

- Remedial Investigation Report, dated August 3, 2009. This report is available electronically on EPA's web site and as a paper copy in EPA's information office in Libby, Montana.
- Final Data Summary Report, dated September 10, 2007. This document is also available for review in EPA's information office in Libby, Montana.
- Technical memorandum prepared by Dr. David Berry, EPA toxicologist, regarding a Riverfront Park exposure scenario for a concert attendee. (See attached Riverfront Park Exposure Scenario)

Request for a detailed definition of the term "casual use" including the boundaries of such use, the monitoring of the use and the physical limitations of the use and request for any studies and data specific to EPA's determination that this level of us represents no threat to public health and safety.

Response:

Casual uses are those uses of the park that do not disturb soil at depth. Examples of casual use include family gatherings, picnics, weddings and concerts. The City allows casual use of the park and, in some cases, issues permits for these activities. EPA has determined that there is not an unacceptable risk of exposure to casual users of the park. This determination was made for the areal extent of Operable Unit 1 of the Libby Asbestos Superfund Site. An assessment was conducted of hypothetical exposures to concert attendees held at the Riverfront Park in Libby. As a conservative approach, attendance was characterized as 8 hours per day for 10 days a year over 25 years. Libby Amphibole air concentrations were based on earlier measurements taken during brush hogging activities (a more aggressive disturbance of surface soil) in addition to those for ambient air that would be more typical of passive activities such as sitting and listening to music or casual walking through the area. Although the Libby-specific toxicity values for Libby amphibole are not yet available, risk-based estimates were derived using currently available toxicity data. Based on the derived estimates, potential exposures to Libby Amphibole during the concert were within acceptable ranges.

EPA has notified the City of locations in the park where visible vermiculite is present. As a conservative measure, EPA also has delineated certain areas of the site where

visible vermiculite may be present with temporary barrier fencing. Vehicular traffic in those areas is discouraged to minimize the potential for spreading vermiculite.

In a written agreement between EPA and the Libby City Council, signed June 12, 2007, the City agreed to notify EPA prior to any activities that may disturb soil at depth (See attached OU1 IC agreement with City). If it is determined that contaminated soil will be encountered during a planned activity, EPA has agreed to work with the City to develop a work plan to protect City workers, the general public and the environment.

Please see:

- Remedial Investigation Report, dated August 3, 2009. This report is available electronically on EPA's web site and as a paper copy in EPA's information office in Libby, Montana.
- Final Data Summary Report, dated September 10, 2007. This document is also available for review in EPA's information office in Libby, Montana.
- Technical memorandum prepared by Dr. David Berry, EPA toxicologist, regarding a Riverfront Park exposure scenario for a concert attendee. (See attached Riverfront Exposure Scenario)

Request for all data that EPA has relied upon pertaining to risk at the former Export Plant property, OU1 of the Superfund site.

Response:

Please see:

- Remedial Investigation Report, dated August 3, 2009. This report is available electronically on EPA's web site and as a paper copy in EPA's information office in Libby, Montana.
- Final Data Summary Report, dated September 10, 2007. This document is also available for review in EPA's information office in Libby, Montana.
- Technical memorandum prepared by Dr. David Berry, EPA toxicologist, regarding a Riverfront Park exposure scenario for a concert attendee. (See attached Riverfront Exposure Scenario.)

Is EPA still doing interior cleanups? How many are planned for the summer (next 3 months)? How many will be done for the life of the project?

Response:

Yes. EPA is continuing to conduct interior cleanups. This year, through August 13, 2010, 35 interior cleanups in Troy and 28 in Libby have been completed. EPA is planning 40 interior cleanups in 2010. To date, EPA has completed interior cleanups at 713 properties.

Request for "any and all" sample results taken from the Chapman Pit, as well as the total volume of material EPA has purchased from the pit, the first date material was purchased and the last.

Response:

On August 9, 2010, EPA emailed the analytical results data and chain of custody sheets for the Chapman Pit to Michelle Hartly and Gordon Sullivan.

EPA began receiving fill material from the Chapman Pit on July 7, 2010, and is still obtaining fill material from that source. As of August 13, 2010, 20,381 tons of material have been obtained from the Chapman Pit. Analytical data is posted on the Libby web site.

Mel Parker

When can the former Screening Plant property be used for commercial development?

Response:

The former Screening Plant property is available for redevelopment. There is asbestos contaminated soil left in place at depth. To the extent that development encounters the contamination, the Environmental Resource Specialist (ERS) program is available to assist the developer in properly managing this contamination. The Environmental Resource Specialist can be reached at 406-291-5335.

Philip Erquiaga

Why was Activity Based Sampling (ABS) conducted July 28, 2010, the day following a rain? Won't that reduce the level of (Libby Asbestos) in ABS results under these conditions?

Response:

While this year's Activity Based Sampling is being conducted during the summer, EPA intends ABS data to represent the true long-term average exposure concentrations.
The goal is to represent normal conditions which may include periodic rain events.

To ensure consistency among properties and to prevent ABS samples from being biased low due to excessive rain or irrigation by homeowners, the soil moisture of every property is measured immediately before scripted activities and air sampling begins. ABS does not occur if the average volumetric water content of the scenario area is measured greater than 30 percent via field probe instrumentation.

To capture a variety of sampling conditions, each ABS scenario will be replicated three times at each property during the summer months throughout the program's duration.

Should ABS not attempt to replicate actual activities on the property being sampled? I have noticed that the ABS activities performed did not replicate the normal activities on a specific property. The mowing was occurring on an area where goats graze and the owners NEVER mow that area. They regularly mow an area EPA did not mow.

Response:

While one of the objectives of this ABS program is to evaluate exposure of residents in OU4 from soil disturbances in their yards, it is not feasible to evaluate every possible type of disturbance. As such, three scenarios were selected which are considered to be realistic and representative examples of disturbances at all residential properties. To ensure consistency among properties, the scripted activities are performed in the same manner at each residence.

Activities are being conducted on commonly used (or high-traffic) areas surrounding the home and exclude limited-use areas (e.g., pasture, field). At the property in question, ABS was conducted within the fenced boundary surrounding the home where the goats were not present.

For more information, the 2010 Sampling and Analysis Plan for OU4 Activity Based Sampling OU4 is posted in the "Technical Documents" section of EPA's Libby web page:
http://epa.gov/region8/superfund/libby/OU4_SupplementalABS_SAP.pdf

Mike Otte

What is done to control dust from truck traffic on Parmenter Hill Road?

Suppliers of materials to EPA for the Libby Asbestos Site Cleanup are required to comply with environmental regulations. Road dust issues are regulated by the County Health Department and the Montana Department of Environmental Quality. Both of these organizations have reviewed the Chapman Pit quarry operations and associated trucking operations on Parmenter Hill Road. Both of these agencies have found that these operations are in compliance with dust control requirements

Attached is the report from the inspection of the operation by MDEQ.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

Ref: ENF-L

VIA REGULAR AND EMAIL

September 22, 2009

Mayor Doug Roll
City of Libby
P.O. Box 1428
Libby, Montana 59923

Re: Libby Asbestos Superfund Site
Former Export Plant – Operable Unit 1,
Structures and Other Improvements

Dear Mayor Roll:

Earlier this month, in a letter dated September 3, 2009, Rebecca Thomas provided you with the Environmental Protection Agency's position concerning structures and other improvements at the former Export Plant property. Ms. Thomas stated that EPA intends to do nothing else to replace or restore the structures at the property. The structures were demolished because they were in poor condition, did not meet current building code requirements, and couldn't be decontaminated. In exchange for the value of the buildings and at no cost to the City, W.R. Grace built a water main to the property that meets all code requirements. W.R. Grace also temporarily relocated Mill Work West, which decided not to move back to the property. Finally, EPA intends to complete soil cleanup at the property in the very near future. Subsequent to the September 3rd letter, Councilman Orr requested a copy of a draft restoration plan that had been submitted by W.R. Grace in April, 2001. Ms. Thomas provided that draft document to you and Councilman Orr on September 11th.

To facilitate any further requests for documents such as that submitted by Councilman Orr on September 14th, I am enclosing a searchable index of the documents in the Environmental Protection Agency's site file concerning the Libby cleanup. Any future requests for documents may be made either through me or directly to our Records Center. If you choose to contact the Records Center directly, please call Ricky Archuleta at (303)-312-6363, or email him at archuleta.rickyj@epa.gov.

In his email message of September 14, 2009, Councilman Orr suggests that the City and EPA are in negotiations concerning structures and other improvements at the Export Plant

property. To be clear, we are not in negotiations. The City already has EPA's position on the matter and, in the absence of any new information, we consider this matter closed.

To reiterate what Ms. Thomas stated in her September 3rd letter, if the City Council believes that there are unresolved issues concerning disposition of the structures and other improvements on the former Export Plant property, please let us know about that. Please send any materials directly to me or contact me if you want to discuss this further. My email address is lensink.andy@epa.gov and my phone number is 303-312-6908.

Sincerely,

Andrew J. Lensink
Sr. Enforcement Attorney

Enclosure

cc: w/o enclosure
City Council of Libby
Victor Ketellapper, EPR-SR
Rebecca Thomas, EPR
R. Allan Payne, Esq.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

September 3, 2009

Mayor Doug Roll
City of Libby
P.O. Box 1428
Libby, Montana 59923

Re: Libby Asbestos Superfund Site
Former Export Plant – Operable Unit 1
Structures and Other Improvements

Dear Mayor Roll:

The purpose of this letter is to provide you with the U.S. Environmental Protection Agency's (EPA) position concerning structures and other improvements at the former Export Plant property. On July 15, 2009, I provided the City with documentation in EPA's possession concerning disposition of the structures on this property. At that time, I asked the City to forward any additional information in the City's possession that EPA should consider regarding the structures and/or other improvements on the former Export Plant property. Having received no additional information from the City, EPA has made the following conclusions:

1) W.R. Grace's decontamination of the five buildings was unsuccessful. The buildings were in poor condition when they were given to the City and did not satisfy building code specifications. As stated in the City attorney's letter of May 30, 2001, "Even if the buildings are successfully re-cleaned, the buildings will be unusable and will have to be removed." EPA directed W.R. Grace to demolish all structures on the property.

2) Millwork West decided against returning to the industrial park and permanently relocated their business.

3) There was inadequate water supply to the building site to meet fire code. W.R. Grace installed a large water main under the railroad tracks and to the former Export Plant property. As stated in the City attorney's letter of April 19, 2003, "The decision was made that an acceptable solution would be if a water line was placed to the property, the buildings removed, and the soil generally restored."

The only further work that EPA anticipates at this time will be the design and implementation of a final remedy for the former Export Plant property to ensure protectiveness into the future. A Proposed Plan, identifying EPA's preferred alternative for the former Export Plant property, has been mailed to the community. A public meeting to discuss EPA's Proposed Plan is scheduled for the evening of Monday, September 28th. We look forward to making a final decision on remediation of this property and returning the property to productive use.

Councilman Orr has asked that I provide a final Restoration Plan for the property. While a "Restoration Plan" is mentioned numerous times in the correspondence on this issue, once the decision had been made to demolish all structures, permanently relocate Millwork West, and install a water line, I do not believe a formal Restoration Plan was ever submitted by W.R. Grace. Councilman Orr also requested any relevant documents associated with an internal review, mentioned in a November 2002 newspaper article. I have already provided relevant documentation to the City resulting from our search of the files. I found no additional information concerning any internal review.

If City Council believes that unresolved issues concerning disposition of the structures and other improvements on the former Export Plant property remain, please provide me with any relevant documentation and I will forward your concerns to our attorney.

Sincerely,

Rebecca J. Thomas

Rebecca J. Thomas
Project Manager

cc: City Council of Libby
Victor Ketellapper, ENF-L
Andy Lensink, ENF-L

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

Ref: 8EPR-PS

Technical Memorandum

From: David Berry, Ph.D., Toxicologist
Program Support Branch

To: Libby Asbestos File

Re: **Riverfront Park Exposure Scenario**
Concert Attendee

This memorandum presents a theoretical exposure scenario for a hypothetical concert attendee at events held at the Riverfront Park in Libby, MT. It is intended to illustrate that attendance at infrequent concerts/events held at the park do not constitute an unacceptable risk to the attendees and that potential exposure(s) to air borne Libby Amphibole asbestos are within acceptable range(s).

Riverfront Park Exposure Scenario

The following exposure assumptions provide a conservative estimate of potential lifetime exposures at the Riverfront Park. The air concentrations used in the following calculations are taken from the OU-1 Remedial Investigation Report (USEPA, 2009).

1. Park visitors attending concerts: 10 days per year (EF)
2. Duration at the park: 8 hrs per day (ET)
3. Dust from parking vehicle is at a level generated by the "brush hogging": 8.9×10^{-3} s/cc
4. Assume that there is a 25 year or 30 year exposure duration
5. Ambient air concentration: 7.0×10^{-6} s/cc

Time weighting factor (TWF)

The time weighting factor is a factor used by EPA to pro-rate an exposure over a specific period of time (a time-weighted exposure value).

$$TWF = ET/24 \times EF/365$$

Where: ET = Average exposure time (hrs/day) on days when 1 exposure is occurring

EF = Average exposure frequency (days/year) in years when exposure is occurring

TWF = 8/24 × 10/365
= 0.33 × 0.0274
= 0.009

Inhalation Risk Estimation

Inhalation risk estimates are calculated based on an assumption that risk is a function of a lifetime average daily dose multiplied by a unit risk factor (cancer potency factor adjusted for breathing rate and fraction of lifetime exposure) (EPA, 2008).

Inhalation unit risk factor (IUR a,d)

Where a = age at first exposure
d = exposure duration in years

Age at start of Exposure	Duration of Exposure, years	Inhalation Unit Risk
20 years	25	0.069
0 years	30	0.1726

The exposure point concentration (EPC) for the air is the concentration of fiber in the air as measured by transmission electron microscopy and is reported in Phase Contrast Microscope equivalent (PCMe) structures per cubic centimeter of air (s/cc).

EPC "brush hogging" scenario = 0.009 s/cc
EPC "ambient air" scenario = 0.00001 s/cc

Inhalation risk is calculated by multiplying the exposure point concentration by the time weighting factor and the Inhalation Unit Risk factor. Risk is express as a probability and it represents the theoretical excess cancer risk due to exposure prorated over a lifetime (risks above the background rate of 1 in 2.5).

For the exposure case where the exposure begins at age 20 and progresses for 25 years, the following risk is estimated:

Risk = Exposure point concentration × TWF ×IUR a,d
= 0.0089 × 0.009 × 0.069
= 6×10^{-6}

For the exposure case where the exposure begins at age 0 and progresses for 30 years, the following risk is estimated:

$$\text{Risk} = \text{EPC} \times \text{TWF} \times \text{IUR a,d}$$
$$= 0.0089 \times 0.009 \times 0.1726$$
$$= 1 \times 10^{-5}$$

If we assume the exposure point concentration is not equivalent to the 8 hours of brush hogging but is a combination of 1 hour to park (brush hogging air concentration) and 7 hours of passive listening to the music (ambient air concentration), the exposure point concentration becomes ≈ 0.00001 f/cc

Now risk is estimated as follows:

For the exposure case where the exposure begins at age 20 and progresses for 25 years, the following risk is estimated:

$$\text{Risk} = \text{EPC} \times \text{TWF} \times \text{IUR a, d}$$
$$= 0.00001 \times 0.009 \times 0.069$$
$$= 6 \times 10^{-9}$$

For the exposure case where the exposure begins at age 0 and progresses for 30 years, the following risk is estimated:

$$\text{Risk} = \text{EPC} \times \text{TWF} \times \text{IUR a, d}$$
$$= 0.00001 \times 0.009 \times 0.1726$$
$$= 2 \times 10^{-8}$$

Exposure Summary

As illustrated in the above calculations, the theoretical risks to infrequent concert attendees at the Riverfront Park in Libby, MT are within the acceptable risk ranges as defined within the National Contingency Plan of 1×10^{-4} to 1×10^{-6}. Based on the calculated risk levels for the infrequent concert attendees, the exposure levels to air borne Libby Amphibole at the Riverfront Park are within acceptable levels for both the scenario where a significant air level is present and a probable air level is present.

References

USEPA, 2008. Framework for Investigating Asbestos-Contaminated Superfund Sites. Prepared by the Asbestos Committee of the Technical Review Workgroup of the Office of Sold Waste and emergency Response, United States Environmental Protection Agency. OSWER #9200.0-68. September 2008 .

USEPA, 2009. Final Remedial Investigation Report. Operable Unit 1 - Former Export Plant Site, Libby Asbestos Superfund Site, Libby, Montana. Prepared by: John R. Volpe Center National Transportation Systems Center, CDM Federal Programs Corporation, Syracuse Research Corporation. August 3, 2009.

REGION 8
1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
http://www.epa.gov/region08

Ref: 8EPR

May 8, 2007

Libby City Council
952 East Spruce Street
Libby, MT 59923

Dear Mayor Berget and City Council Members:

The purpose of this letter is to provide the City of Libby (City) with guidance for future activities at the Former Export Plant (Site), also referred to as Operable Unit 01.

In 2001, W.R. Grace, in response to a Unilateral Administrative Order (UAO) with EPA, conducted a removal action at the Site. Following the cleanup, raw Libby Amphibole (LA) asbestos and vermiculite were found in the buildings, so EPA ordered W.R. Grace to demolish the buildings. The removal action also included excavation to a depth of 18 inches and excavation to depths of 3-4 feet in areas where the buildings once stood because of the presence of contamination. The excavated areas were replaced with clean fill material. This removal action was completed in 2002.

Between May and September 2006, EPA assisted the City with the installation of a water line transecting the Site. This water line passed below the 18" cap of clean fill into contaminated material. This clearly illustrated the need for agreed upon guidelines for work at the Site prior to a Record of Decision and a final Operation and Maintenance Plan being put in place.

The following assumptions should be made when working at the Site:

- Contaminated soil may be encountered within 12" to 18" below ground surface. Due to compaction and usage, it should be assumed that a full 18" of compacted soil will not be present over the entire site.
- Visible vermiculite left at depth may contain measurable amounts of Libby Amphibole asbestos.

Before any intrusive work begins at the Site, the following steps must be taken:

1. The City will notify an EPA representative at the EPA Information Center of the upcoming plans.
2. The EPA representative will meet with the City representative to review the plans and timeline for the activities.
3. EPA will evaluate the likelihood of encountering soil contamination. EPA will then determine if subsurface soil characterization is needed.
4. If it is determined that contaminated soils will be encountered, EPA will work with the

City to develop a work plan protective of City workers and of the environment.

It is imperative that the City notify EPA before work begins at the Site. Ample time is also required for planning purposes. If the City begins work prior to notifying EPA and contaminated soil is uncovered, significant delays to your project schedule may occur while EPA determines what steps should be taken. In addition, the City may be responsible for any costs resulting from the spread of contaminated soil on an already remediated site.

EPA encourages the City to develop your own formal policy for all intrusive work related to the former Export Plant. All employees should be aware that before work begins at the Site, communication with EPA should be the first step.

EPA would like to thank the City for your cooperation and willingness to work together. We hope the success of the water line work at the Former Export Plant will serve as a model for future activities. EPA looks forward to working with the City to put a policy in place for any future construction work at the Site.

If you have any questions, please contact Mike Cirian, EPA Remedial Project Manager at the EPA Information Center at 406-293-6194. Thanks again for your cooperation.

Sincerely,

Paul Peronard
EPA Team Leader

This will be considered an interim guideline for the City of Libby and EPA to follow until the Record of Decision (ROD) is complete for the Libby Superfund Site until approved Institutional Controls (IC) can be established.

Anthony J. Berget — 6/12/07
City of Libby Mayor - Tony Berget — Date

Daniel J. Thede — 6/12/07
Supervisor for City Services - Dan Thede — Date

[signature] — 6/12/07
EPA - Libby Site Manager - Mike Cirian — Date

OPENCUT MINING ROUTINE INSPECTION REPORT

Date **8/10-8/11** Time **7pm and 6:40am** Scientist **Steve Welch** Sent to Operator ☒

Operator **Chapman, Mike and Spencer, Kurt** Site Name **Chapman** County **Lincoln**

New Application ☐ Amendment ☐ Routine ☒ Release Request ☐ Complaint ☒ Other ☐ _____

Permit # **1122** Amend # _____ Sec **17** TWP **30N** RNG **31W** Mineral(s) Mined **sand – gravel - shale**

Decimal Degree: Latitude _____ Longitude _____ Contacts **Mike Chapman – Kurt Spencer**
UTM: Zone 11 E. 604855 N. 5357177

1) Site/Access Roads Marked? ☒NA ☐Yes ☐No _____

2) Condition/Dimension of Access Road(s): **Road to site is part of the subdivision development**

3) Surface Water within 1000' ☒No ☐Yes **ephemeral drainage on the west boundary**

4) Wells within 1,000' of Permit BNDRY ☒No ☐Yes _____

5) Vegetation % & Type: _____

6) Wildlife Habitat _____

7) Soil/OB Salvage/Storage OK? ☐NA ☒Yes ☐No _____

8) Soil Stockpiles Seeded ☐NA ☐Yes ☒No ☐Weedy **grasses have naturally established**

9) Soil/Sight/Sound Barriers OK? ☒NA ☐Yes ☐No **Will create barriers when subdivision develops if necessary.**

10) 10' Buffer between Mining & Soil? ☐NA ☒No ☐Yes **There is a 20 foot section along the sw highwall that does not have a 10 foot buffer – Kurt and Mike were told of this and stated they would take the excavator up there to move it back. I did not notice any soil loss over the highwall.**

11) Fuel Tanks have Secondary Containment? ☒NA ☐Yes ☐No **All fuels are brought in by truck – no tanks.**

12) Dust Management OK? ☐NA ☒Yes ☐No **Crusher running – minimal dust. Upper road watered by 6:45 am – remaining road has been treated with dust suppressant and is effective – minimal dust noticed. Also evaluated road dust on the evening of 8/10 and did not observe excessive dust on the road.**

13) Pit Depth/Highwall Height **approx 15 – 20 feet**

14) Erosion/Stability Problems ☐Yes ☒None Identified _____

15) Garbage onsite? ☐Yes ☒None Identified **Very clean operation**

16) Noxious Weeds Onsite ☐None Identified ☐Yes **very random knapweed plants**

17) Cultural Resources Present? ☒None Identified ☐Yes _____

18) Potential Impacts on Humans? ☒None Identified ☐Yes **Noise from the crusher is very muted even on site. Truck traffic is probably the most notable impact but dust from hauling did not appear excessive – certainly not above opacity standards.**

19) Surface Water Feature OK? ☒NA ☐Yes ☐No _____

20) Drainages/Streams Protected? ☐NA ☐Yes ☐No **The small ephemeral drainage on the southwest side has oversize rock placed near and in it. This was done prior to permitting when the site was being developed. There is no sedimentation occurring from this material. It will be retrieved and utilized.**

21) Offsite Impacts? ☒None Identified ☐Yes **Generally, all industrial and even residential uses will create some off-site impacts. This one is relatively innocuous when compared to many similar operations.**

22) Mining within Permit Boundaries ☐NA ☐Yes ☐No **Appears to be, but I will need to download GPS coordinates. Was unable to locate the NW marker.**

23) Has Reclamation Date Expired ☐NA ☒No ☐Yes _____

SITE SPECIFIC SUMMARY & NOTES

Good operation – very clean. Have not expanded footprint since it was permitted.

Actions Required by the Operator based on the Field Inspection:

1. **Salvage soils on sw highwall to ensure 10 foot buffer between soils and operations.**
2. **Re-establish permit boundary marker on nw corner.**
3. **Spray random knapweed plants to prevent any further spread.**
4. **Retrieve oversize rock on NW corner and remove from the drainage.**

GPS Mapped? ☐No ☒Yes-# Satellites **8** Accuracy (ft) **19** Pictures ☒Yes ☐No Weather **clear**


5
FRESH
OIL
08/11/2010


SPEED
LIMIT
10
08/11/2010


08/11/2010


08/11/2010

08/11/2010


08/11/2010


08/11/2010


08/11/2010


08/11/2010


08/11/2010


08/11/2010